# FREQUENCY MODULATION



Frequency Modulation
During 1945

FM Networks
For Educational Use

Applications Granted

### FM Position Solidified In '45

By ROBERT BARTLEY, Director, FM Dept. NAB

THE past year seems destined to become known as the one in which the foundations were solidified for the future of American broadcasting, FM. The merger of the Frequency Modulation Broadcasters, Inc., with the National Association of Broadcasters set the pattern for self-administration in the traditional American system, and the assignment of the 88-108 mc. band gave FM its long-awaited permanent position in the radio spectrum.

At a meeting held in Washington last October, representatives appointed by the FMBI and NAB boards worked out final details of the merger under which FMBI activities were transferred to the newly created FM Department of the NAB, with NAB memberships provided for FMBI members. The joint committee of the two organizations became the executive committee of the NAB's FM Department, with Walter Damm, FMBI president, as chairman.

Robert Bartley, the first secretary of FMBI and for the past two years director of government relations for NAB, was named director of the new department, which will have headquarters in the old FMBI offices at 1730 I Street, N.W., in Washington.

As one of its primary objectives, the NAB's FM Department is called upon "to seek to secure the assignment of sufficient additional channels for FM so that broadcasting may develop in the public interest to its fullest potentialities . . . "In one of its first official acts, the Department helped bring about the new system of consecutive numbering for FM channels.

Announcement of the switch to the higher frequencies brought about renewed protests by Edwin H. Armstrong, inventor of FM, and the Zenith Corp., both of whom objected to the 88-108 band on grounds that it would not provide satisfactory rural service. Following several stormy sessions with the FCC, Zenith's

proposal that both the 88-108 and the 44-50 bands be used was dropped by the commission.

During the year, FM licenses were sought by many newcomers to radio. Outstanding among these was the International Ladies Garment Workers Union, which has applied for licenses in New York, Philadelphia, Boston, Los Angeles, Chattanooga (conditional permit granted) and St. Louis. The union, which has retained Morris Novik, former director of WNYC, as radio consultant plans to operate the stations on a non-profit, community basis, with heavy public service programming. Conditional grants have been awarded also to the United Auto Workers, CIO, in Detroit, and to the Amalgamated Clothing Workers, CIO, Rochester, N. Y.

While some labor organizations sought to hasten the advent of FM, James C. Petrillo's American Federation of Musicians threw a wrench into the works by demanding added musicians where AM musical shows were duplicated on FM outlets. The edict, in effect, forced network-owned FM stations off the air. Settlement of the dispute is hoped to result from the NAB-AFM meetings slated for April.

With the first twenty FM channels—between 88 and 92 mc.—reserved for noncommercial educational operations by the FCC, the educational aspects of FM took on added importance. Traditionally the leader in educational radio, the Mid-West has again taken the lead with state-wide educational FM webs planned for Wisconsin and Ohio.

As of Mar. 8, 1946, the FCC had granted conditional licenses to 352 FM stations, with about 400 additional applications still pending, and Commission officials forecast several thousand FM outlets throughout the country "in a few years time."

## FM Networks For **Educational Use**

By GEORGE JENNINGS, Assoc. Dir., Radio Council, Chicago Public Schools

THE year 1946 will see a great increase in the number of Frequency Modulation stations, owned and operated by school systems, universities, schools and colleges, and in some instances by "radio councils" reporting directly to state universities or state superintendents of

education.

Under the leadership of the United States Office of Education and through such organizations as the Chicago School Broadcast Conference and the Association for Education by Radio interest in FM for educational use has been greatly stimulated. And this interest, now that equipment is again available, is being translated into specific action by local and state groups.

The University of Wisconsin in the summer of 1945 announced the organization of a state-wide Radio Council to implement the setting up of a state-wide FM network, and late in 1945 the Council, through Harold McCarty, Di-rector of station WHA, announced that funds had been granted by the state legislature and applications had been presented to the FCC for the installation of two FM transmitters, the first "leg" in a six station relay system which will cover the state.

In Michigan, under the chairmanship of Joseph E. Maddy of the University of Michigan, a state-wide plan of FM coverage has been worked out, and the coming year will probably see the start of that service to the people of the state. Louisiana, Kentucky, Illinois, Ohio, Iowa and some twenty other states have evinced enough interest in FM statewide coverage for educational purposes to have surveys made of possible trans-

mitter locations.

All this activity is a healthful sign, providing in the plans the problem of programming such stations and networks is thoroughly considered.

According to some of the plans for state-wide network operation, various schools or universities within the state are to assume responsibility for certain

programs to be fed to the network; in other words, the local stations will do the bulk of their local programming, taking from the net and feeding to the net only those programs of state-wide interest. This plan might cast a heavier burden on the larger institutions, such as state universities, and it might also be a source of friction within the network; i.e. the smaller schools might possibly present the question, "Is the state-wide FM network being hogged by the University or by the state department of education?"

In so far as hook-ups between states is concerned, there is no reason whatever that such might not be done. This is particularly true in the Middle-west, where there already have been, from time to time, hook-ups between the state owned stations, such as WILL at Urbana; WSUI, at Iowa City; and WHA at Madison. It is quite conceivable that when and if Ohio, Michigan, Indiana, Illinois, Wisconsin and Iowa have state-wide FM networks various stations within the net may take responsibility for specific series of programs in definite subjects: for example, WBOE in Cleveland might very well assume the responsibility of doing an elementary art program for the six state area; WBEZ in Chicago might assume the responsibility of doing a series in American history; WHA at Madison might very well do a science program.

Network operation is going to involve several problems the local school stations do not at present have to cope with. The problem of integrating schedules, clearing time, different hours of operation, wire or relay costs, all enter

the picture.

Ideally, a network programming division should be set up to operate within the educational field exactly as the network operates within the commercial field. This presents the problem of financing, headquarters, and the employ-ment of staff. Somewhere in the picture there would have to be a "Czar" (as the sports-writer puts it) of educational broadcasting in the network area.

### FM Broadcast Applications Granted

AS OF FEBRUARY 4, 1946

City	Grantec	Kind of Station			
	ALABAMA				
Birmingham Birmingham Mobile Mobile Montgomery	The Birmingham News,Johnston Broadcasting Co Pape Broadcasting Co Mobile Daily Newspapers G. W. Covington, Jr				
	ARKA	NSAS			
Fort Smith	-	Metropolitan, possibly rural			
	CALIF	ORNIA			
Berkeley Fresno Fresno Marysville Oakland Oakland Ontario Palo Alto Richmond Riverside Sacramento Sacramento Saramento San Bernardir San Diego San Francisco San Jose San Luis Obis San Mateo	KARM, the George Harm Sacramento Valley Broad Tribune Building Co. Warner Brothers The Daily Reports, a Par Peninsula Newspapers, Contra Costa Broadcasti The Broadcasting Corp. of McClatchy Broadcasting Lincoln Dollar Do The Sun Co. of San Ber Lee Brothers Broadcasti Airfan Radio Corp., Ltd. The Associated Broadcasti Valley Broadcasting Co. Christina M. Jacobson, to The Valley Electric Co. Amphlett Printing Co.	ng Co.  rs, Inc.  Metropolitan  Metropolitan  Station  Metropolitan  Metropolitan			
	Santa Maria Daily Times E. F. Peffer				
	CONNE	CTICUT			
Meriden New Haven . New London	The Berkshire BroadcasSilver City Crystal CoElm City Broadcasting CoThames Broadcasting CoAmerican Republican, In	ing CorpCommunityMetropolitan orpMetropolitan pMetropolitan			

#### FM APPLICATIONS GRANTED

City Grantee Kind of Station FLORIDA Ft. Lauderdale ....Gore Publishing Co.......Metropolitan Jacksonville ......Florida Broadcasting Co..............Metropolitan Miami Beach ......Isle of Dreams Broadcasting Corp.......Metropolitan Orlando ........Orlando Daily Newspapers, Inc.......Metropolitan, possibly rural St. Petersburg....Pinellas Broadcasting Co......Metropolitan GEORGIA Atlanta ...........The Constitution Publishing Co.........Metropolitan Augusta . . . . . . . The Augusta Chronicle Broadcasting Co. . Metropolitan Columbus .........Georgia-Alabama Broadcasting Corp......Metropolitan Columbus . . . . . . Columbus Broadcasting Co. . . . . . . . . Metropolitan Macon ..........Middle Ga. Broadcasting Co...........Metropolitan Macon .......Southeastern Broadcasting Co......Metropolitan Moultrie ...... Frank R. Pidcock, Sr..... Metropolitan Sayannah .......Sayannah Broadcasting Co.............Metropolitan IDAHO Pocatello ........Radio Service Corp.............Metropolitan ILLINOIS (Aurora Beacon-News Division) Bloomington ......Radio Station WJBC...................Metropolitan Brookfield .......George M. Ives........................Community Carbondale ......Southern Ill. Broadcasting Corp...... Champaign ...... The Champaign News Gazette, Inc..... Community Evanston ...... Sentinel Radio Corp...... Community Evanston ........North Shore Broadcasting Co., Inc.....Metropolitan Kankakee ........Kankakee Daily Journal.......Community Mt. Vernon ......Midwest Broadcast Co..............Metropolitan Quincy ...... Lee Broadcasting, Inc...... Metropolitan Rock Island ......Rock Island Broadcasting Co.......Metropolitan Waukegan .........Keystone Printing Service, Inc........Metropolitan INDIANA Columbus .......Syndicate Theaters, Inc............Metropolitan Connersville ......News-Examiner Co...............Metropolitan Elkhart ...... Truth Publishing Co., Inc..... Metropolitan Shelbyville ...... Shelbyville Radio, Inc............... Metropolitan

#### IOWA

IOWA		
Burlington Burlington Broadcasting Co. Metropolitan, Cedar Rapids The Gazette Co. Metropolitan Des Moines Central Broadcasting Co. Metropolitan Des Moines Cowles Broadcasting Co. Metropolitan, Dubuque Telegraph Herald Metropolitan, Dubuque Dubuque Broadcasting Co. Metropolitan, Waterloo Josh Higgins Broadcasting Co. Metropolitan, Waterloo	possibly possibly	rural rural rural
KANSAS		
LawrenceThe World CompanyMetropolitanTopekaTopeka Broadcasting Association, Inc.MetropolitanWichitaFarmers & Bankers Broadcasting Corp.MetropolitanWichitaThe Rario Station KFH Co.Metropolitan		
KENTUCKY		
Lexington       American Broadcasting Corp. of Kentucky       Metropolitan Metropolitan         Louisville       Courier Journal & Louisville Times Co. Metropolitan         Louisville       WAVE, Inc. Metropolitan         Louisville       Northside Broadcasting Corp. Metropolitan         Owensboro       Owensboro Broadcasting Co., Inc. Metropolitan         Paducah       Paducah Broadcasting Co., Inc. Metropolitan         Paducah       Paducah Newspapers, Inc. Metropolitan		
LOUISIANA		
AlexandriaAlexandria Broadcasting Co., Inc.MetropolitanAlexandriaCentral La. Broadcasting Corp.CommunityNew OrleansThe Times Picayune Pub. Co.MetropolitanNew OrleansLoyola UniversityMetropolitanNew OrleansSupreme Broadcasting System, Inc.Metropolitan	possibly	rural
MAINE		
BangorPortland Broadcasting System, Inc Metropoitan		
MARYLAND		
Frederick      The Monocacy Broadcasting Co.      Metropoitan         Hagerstown      Hagerstown Broadcasting Co.      Metropoitan         Salisbury      The Peninsula Broadcasting Co.      Metropoitan		
MASSACHUSETTS		
Brockton Cur-Nan Co. Community Fall River Fall River Broadcasting Co., Inc. Metropolitan Fitchburg Mitchell G. Meyers, Reuben E. AronheimMetropolitan & Milton H. Meyers Greenfield Recorder Publishing Corp. Community Greenfield John W. Haigis Community Haverhill The Haverhill Gazette Co. Metropolitan Haverhill The Hampden-Hampshire Corp. Metropolitan Lawrence Hildreth & Rogers Co. Metropolitan New Bedford Bristol Broadcasting Co., Inc. Metropolitan North Adams James A. Hardman Metropolitan Pittsfield Monroe B. England Metropolitan Pittsfield Eagle Publishing Co. Community Salem North Shore Broadcasting Co. Community Springfield WMAS, Inc. Metropolitan		

### FM APPLICATIONS GRANTED

City	Grantee	Kind of Station
	MICHIGAN	
Benton Harbo Dearborn Detroit Detroit Detroit Escanaba Flint Lansing Muskegon Pontiac Port Huron Saginaw	Washtenaw Broadcasting Co.  The Palladium Pub. Co. Herman Radner WJR, The Goodwill Station, Inc. UAW-CIO Broadcasting Corp. of I. King-Trendle Broadcasting Corp. John B. Norton Flint Broadcasting Co. WJIM, Inc. Ashbacker Radio Corp. Pontiac Broadcasting Co. Times Herald Co. Saginaw Broadcasting Co. Wyandotte News Co.	Metropolitan Community Metropolitan Mich. Metropolitan
	MINNESOTA	
Minneapolis .	Southern Minn. Supply Co Minn. Broadcasting Corp Independent Merchants Broadcast-	Metropolitan - Metropolitan
St. Paul	ing Co	MetropolitanMetropolitan
	MISSISSIPPI	
	Birney Imes, Sr	
	MISSOURI	
Kansas City . Kansas City . St. Louis St. Louis St. Louis St. Louis	Joplin Broadcasting Co.  WHB Broadcasting Co.  The Kansas City Star Co.  Thomas Patrick, Inc.  Mo. Broadcasting Corp.  The Pulitzer Pub. Co.  Star-Times Pub. Co.  St. Louis University	Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan
	NEBRASKA	
Omaha	Cornbelt Broadcasting Corp Inland Broadcasting Co World Publishing Co	Metropolitan
	NEVADA	
	Reno Newspapers, Inc	
	NEW HAMPSHIR	
Manchester .	Claremont Eagle, Inc	Metropolitan
	NEW JERSEY	
Atlantic City Atlantic City Bridgeton New Brunswic Paterson		MetropolitanMetropolitanMetropolitanCommunityCommunity

NEW YORK			
Buffalo Roy L. Albertson Buffalo WBEN, Inc. Buffalo WEBR, Inc.	. Metropolitan,	possibly	rural
Corning W. A. Underhill and E. S. Underhill, Jr., d/b as The Evening Leader  Dunkirk	. Metropolitan		
Hornell The W. H. Greenhow Co  Ithaca Cornell University  Jamestown James Broadcasting Co., Inc	. Metropolitan, . Rural	possibly	rural
Ogdensburg St. Lawrence Broadcasting Corp. Oswego Palladium-Times, Inc. Rochester Amalgamated Broadcasting System, Inc.	. Rural . Metropolitan		
Syracuse Syracuse Broadcasting Corp.  Syracuse WAGE, Inc.  Syracuse Central New York Broadcasting	. Metropolitan		
Radio Corp	. Metropolitan		
Troy         Troy Record Co.           Utica         WIBX, Inc.           Watertown         The Brockway Co.	Metropolitan		
White PlainsWestchester Broadcasting Corp			
NORTH CAROLINA			
BurlingtonAlamance Broadcasting Co., Inc	. Metropolitan		
Durham Durham Radio Corp	. Metropolitan	possibly	rural
Greensboro Greensboro News Co	. Metropolitan,	possibly	rural
High Point High Point Enterprise, Inc	. Metropolitan	possibly	rural
Roanoke RapidsTelecast, Inc	. Metropolitan		
Rocky MountWilliam Avera Wynne	Metropolitan Metropolitan		
WashingtonTar Heel Broadcasting System, Inc WilmingtonRichard Austin Dunlea WilmingtonWilmington Star-News Co	. Metropolitan		
Winston-SalemWAIR Broadcasting Co			
OHIO			
Cincinnati The Cincinnati Times-Star Co. Cincinnati The Crosley Corp. Cincinnati L. B. Wilson, Inc. Cincinnati Buckeye Broadcasting Co.	. Metropolitan . Metropolitan . Metropolitan	possibly	rural
Cincinnati Scripps-Howard Radio, Inc.  Columbus Lloyd A. Pixley, et al, d/b as The Pixleys	Metropolitan		
Dover	. Metropolitan, . Metropolitan	possibly	rural
OKLAHOMA			
ArdmoreJohn F. Easley			

### FM APPLICATIONS GRANTED

City	Grantee	Kind of Ste	ation	
Muskogaa	Muskogee Broadcasting Co	Metropolitan		
	WKY Radiophone Co		possibly	rura
Oklahoma City	KOMA, Inc.	. Metropolitan	possibly	rura
Oklahoma City	Plaza Court Broadcasting Co	. Metropolitan.	possibly	rura
Oklahoma City	O. L. Taylor	Metropolitan	possisi	
Shawnee	KBFF Broadcasting Co	Metropolitan		
	Fred Jones Broadcasting Co			
	OREGON			
	Mrs. W. J. Virgin			
	Medford Printing Co			
Portland	KXL Broadcasters	Metropolitan,	possibly	rura
	Broadcasters Ore., Ltd			
Portland	KALE, Inc	Metropolitan		
Portland	Oregonian Pub. Co	Metropolitan		
92 92 92 92 92 92 92 92 92 92 92 92 92 9	PENNSYLVANIA			
Allentown	Lehigh Valley Broadcasting Co	Metropolitan		
	The Gable Broadcasting Co			
	The Bethlehems' Globe Pub. Co			
	Bradford Publications, Inc			
Clearfield	Airplane & Marine Instruments, Inc	Metropolitan		
	Tri-County Broadcasting Co., Inc			
	Presque Isle Broadcasting Co	Metropolitan		
Forks Township	),			
Nr. Easton	Easton Publishing Co	Community		
Harrisburg	The Patriot Co	Metropolitan		
Harrisburg	WHP, Inc.	Metropolitan		
	WJAC, Inc			
	Peoples Broadcasting Co			
	WGAL, Inc.			
	H. C. Winslow			
	Scranton Broadcasters, Inc			
Scranton	Sunbury Broadcasting Corp	Metropolitan		
	Fayette Broadcasting Corp			
	Uniontown Newspapers, Inc		nossibly	rure
	Louis G. Baltimore		possibly	1410
Williamsport	WRAK, Inc.	Metropolitan		
	Susquehanna Broadcasting Co			
	White Rose Broadcasting Co			
	SOUTH CAROLINA			
Anderson	Wilton E. Hall	Metropolitan.	possibly	rura
	Atlantic Coast Broadcasting Co		Postary	
	Surety Life Ins. Co			
	The Greenville News Piedmont Co			
	Textile Broadcasting Co			
	Grenco, Inc			
Rock Hill	Spartanburg Advertising Co	Community		
	York County Broadcasting Co		possibly	rura
	TENNESSEE			
Bristol	Radiophone Broadcasting Station	Metropolitan,	possibly	rura
Chattanasa	WOPI, Inc.	Motronalita-		
Chattanooga	Unity Broadcasting Corp. of Tenn	Wetropolitan		
Clarkarina Clarkarina	WDOD Broadcasting Corp	Metropolitan		
	Leaf Chronicle Co			
	The Sun Pub. Co			
ouchson	The Sun Fub. Co			

### • • FM APPLICATIONS GRANTED

City	Grantee	Kind of St	ation	
Knoxville Knoxville Memphis Memphis	WJHL, Inc. Knoxville Pub. Co. S. E. Adcock. Hoyt B. Wooten Herbert Herff. WSIX Broadcasting Station.	MetropolitanMetropolitanMetropolitanMetropolitan,Metropolitan	possibly	rural
	TEXAS			
Beaumont	Agricultural and Mechanical Colego of Texas  KRIC, Inc. Brownsvile Herald Pub. Co. The KLUF Broadcasting Co., Inc. Harbenito Broadcasting Co., Inc. Houston Printing Corp. KTRH Broadcasting Co. The Walmac Co. Bell Broadcasting Co., Inc. KCMC, Inc. Times Publishing Co. of Wichita Fa	Metropolitan Metropolitan Community Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Community Metropolitan		
	UTAH			
Salt Lake City.	Intermountain Broadcasting Corp.	Metropolitan		
	VIRGINIA			
Lynchburg Norfolk Portsmouth Richmond	Lynchburg Broadcasting Corp Old Dominion Broadcasting Corp WTAR Radio Corp Portsmouth Radio Corp Havens & Martin, Inc Richard Field Lewis, Jr	Metropolitan Metropolitan Metropolitan Metropolitan	possibly	rural
	WA GUN GEON	•		
Seattle	WASHNGTONQueen City Broadcasting Co., IncEvergreen Broadcasting CorpRadio Sales CorpFisher's Blend Station, Inc	Metropolitan	- ·	
	WEST VIRGINIA			
Beckley Bluefield Huntington	Beckley Newspaper Corp. Joe L. Smith, Jr. Daily Telegraph Printing Co. Huntington Broadcasting Corp. W. Va. Radio Corp.	Metropolitan, Metropolitan, Metropolitan		
	WISCONSIN			
LaCrosse Madison Milwaukee Oshkosh Racine Sheboygan	Wm. C. Forrest. d Green Bay Newspaper Co WKBH, Inc. Badger Broadcasting Co Milwaukee Broadcasting Co Myles H. Johns, d/b as Oshkosh Broadcasting Co Racine Broadcasting Corp. Press Pub. Co Record Herald Co.	MetropolitanMetropolitan,MetropolitanMetropolitanMetropolitanMetropolitanMetropolitanMetropolitan	possibly	rural
	WYOMING			
Cheyenne	Frontier Broadcasting Co	Metropolitan		
	1088			